Release notes for ENDF/B Development n-036_Kr_083 evaluation



April 26, 2017

- checkr Warnings:
 - 1. A previous error halted parsing of the current section MAT=3640, MF=1, MT=451 (1): Parsing stopped

ERROR(S) FOUND IN MAT=3640, MF= 1, MT=451
SECTION CANNOT BE CHECKED FROM SEQUENCE NUMBER 90 TO 148

- checkr Errors:
 - 1. A variable is outside the allowed ENDF range MAT=3640, MF=1, MT=451 (0): Variable range

ERROR(S) FOUND IN MAT=3640, MF= 1, MT=451
MOD = 1 OUT OF RANGE 0 - 0 RECORD NUMBER 90

2. Missing a section in directory so your directory is messed up. This error will break everything else MAT=3640, MF=2, MT=151 (0): Directory (b)

ERROR(S) FOUND IN MAT=3640, MF= 2, MT=151
SECTION 2/151 NOT IN DIRECTORY RECORD NUMBER 150

3. Missing a section in directory so your directory is messed up. This error will break everything else MAT=3640, MF=3, MT=1 (0): Directory (b)

ERROR(S) FOUND IN MAT=3640, MF= 3, MT= 1
SECTION 3/ 1 NOT IN DIRECTORY RECORD NUMBER 417

Missing a section in directory so your directory is messed up. This error will break everything else
 MAT=3640, MF= 3, MT= 2 (0): Directory (b)

ERROR(S) FOUND IN MAT=3640, MF= 3, MT= 2
SECTION 3/ 2 NOT IN DIRECTORY RECORD NUMBER 459

5. Missing a section in directory so your directory is messed up. This error will break everything else MAT=3640, MF=3, MT=4 (0): Directory (b)

ERROR(S) FOUND IN MAT=3640, MF= 3, MT= 4
SECTION 3/ 4 NOT IN DIRECTORY RECORD NUMBER 494

6. Missing a section in directory so your directory is messed up. This error will break everything else $MAT=3640,\ MF=3,\ MT=16$ (0): Directory (b)

ERROR(S) FOUND IN MAT=3640, MF= 3, MT= 16
SECTION 3/ 16 NOT IN DIRECTORY RECORD NUMBER 534

7. Missing a section in directory so your directory is messed up. This error will break everything else MAT=3640, MF=3, MT=17 (0): Directory (b)

ERROR(S) FOUND IN MAT=3640, MF= 3, MT= 17 SECTION 3/ 17 NOT IN DIRECTORY

RECORD NUMBER 555

8. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 3640, MF = 3, MT = 22 (0): Directory (b)

ERROR(S) FOUND IN MAT=3640, MF= 3, MT= 22 SECTION 3/ 22 NOT IN DIRECTORY

RECORD NUMBER 561

9. Missing a section in directory so your directory is messed up. This error will break everything else MAT=3640, MF=3, MT=28 (0): Directory (b)

ERROR(S) FOUND IN MAT=3640, MF= 3, MT= 28 SECTION 3/ 28 NOT IN DIRECTORY

RECORD NUMBER 576

10. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 3640, MF = 3, MT = 51 (0): Directory (b)

ERROR(S) FOUND IN MAT=3640, MF= 3, MT= 51 SECTION 3/ 51 NOT IN DIRECTORY

RECORD NUMBER 592

11. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 3640, MF = 3, MT = 52 (0): Directory (b)

ERROR(S) FOUND IN MAT=3640, MF= 3, MT= 52 SECTION 3/ 52 NOT IN DIRECTORY

RECORD NUMBER 632

12. Missing a section in directory so your directory is messed up. This error will break everything else MAT=3640, MF=3, MT=53 (0): Directory (b)

ERROR(S) FOUND IN MAT=3640, MF= 3, MT= 53

SECTION 3/53 NOT IN DIRECTORY

RECORD NUMBER 670

13. Missing a section in directory so your directory is messed up. This error will break everything else MAT=3640, MF=3, MT=54 (0): Directory (b)

ERROR(S) FOUND IN MAT=3640, MF= 3, MT= 54

SECTION 3/54 NOT IN DIRECTORY

RECORD NUMBER 703

14. Missing a section in directory so your directory is messed up. This error will break everything else MAT=3640, MF=3, MT=55 (0): Directory (b)

ERROR(S) FOUND IN MAT=3640, MF= 3, MT= 55 SECTION 3/ 55 NOT IN DIRECTORY

RECORD NUMBER 736

15. Missing a section in directory so your directory is messed up. This error will break everything else MAT=3640, MF=3, MT=56 (0): Directory (b)

ERROR(S) FOUND IN MAT=3640, MF= 3, MT= 56 SECTION 3/ 56 NOT IN DIRECTORY

RECORD NUMBER 769

16. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 3640, MF = 3, MT = 57 (0): Directory (b)

ERROR(S) FOUND IN MAT=3640, MF= 3, MT= 57 SECTION 3/ 57 NOT IN DIRECTORY

RECORD NUMBER 801

17. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 3640, MF = 3, MT = 58 (0): Directory (b)

ERROR(S) FOUND IN MAT=3640, MF= 3, MT= 58 SECTION 3/ 58 NOT IN DIRECTORY

RECORD NUMBER 833

18. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 3640, MF = 3, MT = 59 (0): Directory (b)

ERROR(S) FOUND IN MAT=3640, MF= 3, MT= 59 SECTION 3/ 59 NOT IN DIRECTORY

RECORD NUMBER 865

19. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 3640, MF = 3, MT = 60 (0): Directory (b)

ERROR(S) FOUND IN MAT=3640, MF= 3, MT= 60 SECTION 3/ 60 NOT IN DIRECTORY

RECORD NUMBER 896

20. Missing a section in directory so your directory is messed up. This error will break everything else MAT=3640, MF=3, MT=61 (0): Directory (b)

ERROR(S) FOUND IN MAT=3640, MF= 3, MT= 61 SECTION 3/ 61 NOT IN DIRECTORY

RECORD NUMBER 927

21. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 3640, MF = 3, MT = 62 (0): Directory (b)

ERROR(S) FOUND IN MAT=3640, MF= 3, MT= 62 SECTION 3/ 62 NOT IN DIRECTORY

RECORD NUMBER 958

22. Missing a section in directory so your directory is messed up. This error will break everything else MAT=3640, MF=3, MT=63 (0): Directory (b)

ERROR(S) FOUND IN MAT=3640, MF= 3, MT= 63 SECTION 3/ 63 NOT IN DIRECTORY

RECORD NUMBER 988

23. Missing a section in directory so your directory is messed up. This error will break everything else MAT=3640, MF=3, MT=64 (0): Directory (b)

ERROR(S) FOUND IN MAT=3640, MF= 3, MT= 64 SECTION 3/ 64 NOT IN DIRECTORY

RECORD NUMBER 1018

24. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 3640, MF = 3, MT = 65 (0): Directory (b)

ERROR(S) FOUND IN MAT=3640, MF= 3, MT= 65 SECTION 3/ 65 NOT IN DIRECTORY

RECORD NUMBER 1048

25. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 3640, MF = 3, MT = 91 (0): Directory (b)

ERROR(S) FOUND IN MAT=3640, MF= 3, MT= 91 SECTION 3/ 91 NOT IN DIRECTORY

RECORD NUMBER 1077

26. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 3640, MF = 3, MT = 102 (0): Directory (b)

ERROR(S) FOUND IN MAT=3640, MF= 3, MT=102 SECTION 3/102 NOT IN DIRECTORY

RECORD NUMBER 1106

27. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 3640, MF = 3, MT = 103 (0): Directory (b)

ERROR(S) FOUND IN MAT=3640, MF= 3, MT=103 SECTION 3/103 NOT IN DIRECTORY

RECORD NUMBER 1141

28. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 3640, MF = 3, MT = 104 (0): Directory (b)

ERROR(S) FOUND IN MAT=3640, MF= 3, MT=104 SECTION 3/104 NOT IN DIRECTORY

RECORD NUMBER 1171

29. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 3640, MF = 3, MT = 105 (0): Directory (b)

ERROR(S) FOUND IN MAT=3640, MF= 3, MT=105 SECTION 3/105 NOT IN DIRECTORY

RECORD NUMBER 1189

30. Missing a section in directory so your directory is messed up. This error will break everything else MAT=3640, MF=3, MT=106 (0): Directory (b)

ERROR(S) FOUND IN MAT=3640, MF= 3, MT=106

SECTION 3/106 NOT IN DIRECTORY

RECORD NUMBER 1205

31. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 3640, MF = 3, MT = 107 (0): Directory (b)

ERROR(S) FOUND IN MAT=3640, MF= 3, MT=107 SECTION 3/107 NOT IN DIRECTORY

RECORD NUMBER 1214

32. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 3640, MF = 3, MT = 111 (0): Directory (b)

ERROR(S) FOUND IN MAT=3640, MF= 3, MT=111 SECTION 3/111 NOT IN DIRECTORY

RECORD NUMBER 1243

33. Missing a section in directory so your directory is messed up. This error will break everything else MAT=3640, MF=4, MT=2 (0): Directory (b)

ERROR(S) FOUND IN MAT=3640, MF= 4, MT= 2 SECTION 4/ 2 NOT IN DIRECTORY

RECORD NUMBER 1252

34. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 3640, MF = 4, MT = 16 (0): Directory (b)

ERROR(S) FOUND IN MAT=3640, MF= 4, MT= 16 SECTION 4/ 16 NOT IN DIRECTORY

RECORD NUMBER 1699

35. Missing a section in directory so your directory is messed up. This error will break everything else MAT=3640, MF=4, MT=17 (0): Directory (b)

ERROR(S) FOUND IN MAT=3640, MF= 4, MT= 17 SECTION 4/ 17 NOT IN DIRECTORY

RECORD NUMBER 1740

36. Missing a section in directory so your directory is messed up. This error will break everything else MAT=3640, MF=4, MT=22 (0): Directory (b)

ERROR(S) FOUND IN MAT=3640, MF= 4, MT= 22 SECTION 4/ 22 NOT IN DIRECTORY

RECORD NUMBER 1751

37. Missing a section in directory so your directory is messed up. This error will break everything else

 $MAT = \bar{3}640$, MF = 4, MT = 28 (0): Directory (b)

ERROR(S) FOUND IN MAT=3640, MF= 4, MT= 28 SECTION 4/ 28 NOT IN DIRECTORY

RECORD NUMBER 1778

38. Missing a section in directory so your directory is messed up. This error will break everything else MAT=3640, MF=4, MT=51 (0): Directory (b)

ERROR(S) FOUND IN MAT=3640, MF= 4, MT= 51 SECTION 4/ 51 NOT IN DIRECTORY

RECORD NUMBER 1807

39. Missing a section in directory so your directory is messed up. This error will break everything else MAT=3640, MF=4, MT=52 (0): Directory (b)

ERROR(S) FOUND IN MAT=3640, MF= 4, MT= 52 SECTION 4/ 52 NOT IN DIRECTORY

RECORD NUMBER 2049

40. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 3640, MF = 4, MT = 53 (0): Directory (b)

ERROR(S) FOUND IN MAT=3640, MF= 4, MT= 53 SECTION 4/ 53 NOT IN DIRECTORY

RECORD NUMBER 2146

41. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 3640, MF = 4, MT = 54 (0): Directory (b)

ERROR(S) FOUND IN MAT=3640, MF= 4, MT= 54 SECTION 4/ 54 NOT IN DIRECTORY

RECORD NUMBER 2235

42. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 3640, MF = 4, MT = 55 (0): Directory (b)

ERROR(S) FOUND IN MAT=3640, MF= 4, MT= 55 SECTION 4/ 55 NOT IN DIRECTORY

RECORD NUMBER 2322

43. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 3640, MF = 4, MT = 56 (0): Directory (b)

ERROR(S) FOUND IN MAT=3640, MF= 4, MT= 56 SECTION 4/ 56 NOT IN DIRECTORY

RECORD NUMBER 2407

44. Missing a section in directory so your directory is messed up. This error will break everything else MAT=3640, MF=4, MT=57 (0): Directory (b)

ERROR(S) FOUND IN MAT=3640, MF= 4, MT= 57

SECTION 4/ 57 NOT IN DIRECTORY

RECORD NUMBER 2601

45. Missing a section in directory so your directory is messed up. This error will break everything else MAT=3640, MF=4, MT=58 (0): Directory (b)

ERROR(S) FOUND IN MAT=3640, MF= 4, MT= 58 SECTION 4/ 58 NOT IN DIRECTORY

RECORD NUMBER 2682

46. Missing a section in directory so your directory is messed up. This error will break everything else MAT=3640, MF=4, MT=59 (0): Directory (b)

ERROR(S) FOUND IN MAT=3640, MF= 4, MT= 59 SECTION 4/ 59 NOT IN DIRECTORY

RECORD NUMBER 2869

47. Missing a section in directory so your directory is messed up. This error will break everything else MAT=3640, MF=4, MT=60 (0): Directory (b)

ERROR(S) FOUND IN MAT=3640, MF= 4, MT= 60 SECTION 4/ 60 NOT IN DIRECTORY

RECORD NUMBER 2946

48. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 3640, MF = 4, MT = 61 (0): Directory (b)

ERROR(S) FOUND IN MAT=3640, MF= 4, MT= 61 SECTION 4/ 61 NOT IN DIRECTORY

RECORD NUMBER 3123

49. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 3640, MF = 4, MT = 62 (0): Directory (b)

ERROR(S) FOUND IN MAT=3640, MF= 4, MT= 62 SECTION 4/ 62 NOT IN DIRECTORY

RECORD NUMBER 3196

50. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 3640, MF = 4, MT = 63 (0): Directory (b)

ERROR(S) FOUND IN MAT=3640, MF= 4, MT= 63 SECTION 4/ 63 NOT IN DIRECTORY

RECORD NUMBER 3334

51. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 3640, MF = 4, MT = 64 (0): Directory (b)

ERROR(S) FOUND IN MAT=3640, MF= 4, MT= 64 SECTION 4/ 64 NOT IN DIRECTORY

RECORD NUMBER 3470

52. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 3640, MF = 4, MT = 65 (0): Directory (b)

ERROR(S) FOUND IN MAT=3640, MF= 4, MT= 65 SECTION 4/ 65 NOT IN DIRECTORY

RECORD NUMBER 3627

53. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 3640, MF = 4, MT = 91 (0): Directory (b)

ERROR(S) FOUND IN MAT=3640, MF= 4, MT= 91 SECTION 4/ 91 NOT IN DIRECTORY

RECORD NUMBER 3779

54. Missing a section in directory so your directory is messed up. This error will break everything else MAT=3640, MF=5, MT=16 (0): Directory (b)

ERROR(S) FOUND IN MAT=3640, MF= 5, MT= 16

SECTION 5/ 16 NOT IN DIRECTORY

RECORD NUMBER 3845

55. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 3640, MF = 5, MT = 17 (0): Directory (b)

ERROR(S) FOUND IN MAT=3640, MF= 5, MT= 17 SECTION 5/ 17 NOT IN DIRECTORY

RECORD NUMBER 4025

56. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 3640, MF = 5, MT = 22 (0): Directory (b)

ERROR(S) FOUND IN MAT=3640, MF= 5, MT= 22 SECTION 5/ 22 NOT IN DIRECTORY

RECORD NUMBER 4055

57. Missing a section in directory so your directory is messed up. This error will break everything else MAT=3640, MF=5, MT=28 (0): Directory (b)

ERROR(S) FOUND IN MAT=3640, MF= 5, MT= 28 SECTION 5/ 28 NOT IN DIRECTORY

RECORD NUMBER 4158

58. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 3640, MF = 5, MT = 91 (0): Directory (b)

ERROR(S) FOUND IN MAT=3640, MF= 5, MT= 91 SECTION 5/ 91 NOT IN DIRECTORY

RECORD NUMBER 4271

- fudge-4.0 Warnings:
 - 1. Missing a channel with a particular angular momenta combination resonances / resolved / MultiLevel_BreitWigner (Error # 0): missingResonanceChannel

WARNING: Missing a channel with angular momenta combination L = 0, J = 3.0 and S = 3.0 for "capture"

2. Potential scattering hasn't converted, you need more L's! resonances / resolved (Error # 1): potentialScatteringNotConverged

WARNING: Potential scattering hasn't converged by L=O at E=272.0 eV, xs[0]/xs[0]=100.0% > 0.1%

3. Cross section does not match sum of linked reaction cross sections $crossSectionSum\ label\ 0:\ total\ (Error\ \#\ 0):\ CS\ Sum.$

WARNING: Cross section does not match sum of linked reaction cross sections! Max diff: 0.23%

- fudge-4.0 Errors:
 - 1. Calculated and tabulated Q values disagree. reaction label 17: n[multiplicity: '2'] + Kr82 (Error # 0): Q mismatch

WARNING: Calculated and tabulated Q-values disagree: -7335620.022369385 eV vs -7.4624e6 eV!

2. Calculated and tabulated Q values disagree.

reaction label 18: n/multiplicity: '3'] + Kr81 (Error # 0): Q mismatch

WARNING: Calculated and tabulated Q-values disagree: -18302407.51991272 eV vs -1.8428e7 eV!

3. Calculated and tabulated Q values disagree. reaction label 19: n + H1 + Br82 (Error # 0): Q mismatch

WARNING: Calculated and tabulated Q-values disagree: -9646317.0650177 eV vs -9.7725e6 eV!

4. Calculated and tabulated Q values disagree. reaction label 20: Kr84 + gamma (Error # 0): Q mismatch

WARNING: Calculated and tabulated Q-values disagree: 10648497.52746582 eV vs 1.052e7 eV!

5. Calculated and tabulated Q values disagree. reaction label 21: n + He4 + Se79 (Error # 0): Q mismatch

WARNING: Calculated and tabulated Q-values disagree: -6361124.866119385 eV vs -6.4872e6 eV!

6. Calculated and tabulated Q values disagree. reaction label 22: H1[multiplicity:'2'] + Se82 (Error # 0): Q mismatch

WARNING: Calculated and tabulated Q-values disagree: -8766426.232635498 eV vs -8.8932e6 eV!

7. Calculated and tabulated Q values disagree. reaction label 23: H1 + Br83_s (Error # 0): Q mismatch

WARNING: Calculated and tabulated Q-values disagree: -62534.61445617676 eV vs -190030. eV!

8. Calculated and tabulated Q values disagree. reaction label 24: $H2 + Br82_s$ (Error # 0): Q mismatch

WARNING: Calculated and tabulated Q-values disagree: -7421750.964080811 eV vs -7.5479e6 eV!

9. Calculated and tabulated Q values disagree. reaction label 25: H3 + Br81_s (Error # 0): Q mismatch

WARNING: Calculated and tabulated Q-values disagree: -8757461.096130371 eV vs -8.8832e6 eV!

10. Calculated and tabulated Q values disagree. reaction label 26: He3 + Se81_s (Error # 0): Q mismatch

WARNING: Calculated and tabulated Q-values disagree: -10324189.80924988 eV vs -1.045e7 eV!

11. Calculated and tabulated Q values disagree. reaction label 27: He4 + Se80_s (Error # 0): Q mismatch

WARNING: Calculated and tabulated Q-values disagree: 3552526.639816284 eV vs 3.426e6 eV!

• njoy2012 Warnings:

1. With the advent of the ENDF-6 format, it is possible to make evaluations that fully describe all the products of a nuclear reaction. Some carry-over evaluations from earlier ENDF/B versions also have this capability, but many do not. This message is intended to goad evaluators to improve things!

groupr...compute self-shielded group-averaged cross-sections (0): GROUPR/conver (0)

---message from conver---cannot do complete particle production for mt= 16 only mf4/mf5 provided

- 2. With the advent of the ENDF-6 format, it is possible to make evaluations that fully describe all the products of a nuclear reaction. Some carry-over evaluations from earlier ENDF/B versions also have this capability, but many do not. This message is intended to good evaluators to improve things!
 - groupr...compute self-shielded group-averaged cross-sections (1): GROUPR/conver (0)
 - ---message from conver---cannot do complete particle production for mt= 17 only mf4/mf5 provided
- 3. With the advent of the ENDF-6 format, it is possible to make evaluations that fully describe all the products of a nuclear reaction. Some carry-over evaluations from earlier ENDF/B versions also have this capability, but many do not. This message is intended to goad evaluators to improve things!
 - groupr...compute self-shielded group-averaged cross-sections (2): GROUPR/conver (0)
 - ---message from conver---cannot do complete particle production for mt= 22 only mf4/mf5 provided
- 4. With the advent of the ENDF-6 format, it is possible to make evaluations that fully describe all the products of a nuclear reaction. Some carry-over evaluations from earlier ENDF/B versions also have this capability, but many do not. This message is intended to goad evaluators to improve things!

 groupr...compute self-shielded group-averaged cross-sections (3): GROUPR/conver (0)
 - ---message from conver---cannot do complete particle production for mt= 28 only mf4/mf5 provided
- 5. With the advent of the ENDF-6 format, it is possible to make evaluations that fully describe all the products of a nuclear reaction. Some carry-over evaluations from earlier ENDF/B versions also have this capability, but many do not. This message is intended to goad evaluators to improve things!

 groupr...compute self-shielded group-averaged cross-sections (4): GROUPR/conver (0)
 - ---message from conver---cannot do complete particle production for mt= 91 only mf4/mf5 provided